

002 018; Q9999 Q6644-R

003 018; ND01; ND07; N9999 N5721-R; N9999 N6600; K9676-R; Q9999 Q9289
Q9212; K9892; B9999 B4079 B3930 B3838 B3747; N9999 N6440-R; B9999
B4842 B4831 B4740; K9483-R; K9574 K9483; N9999 N6177-R; N9999 N6111
N6097; K9416

<03>

001 018; G0033-R G0022 D01 D02 D51 D53; H0000; H0011-R; P1150

002 018; ND01; ND07; N9999 N5721-R; N9999 N6600; K9676-R; Q9999 Q9289
Q9212; K9892; B9999 B4079 B3930 B3838 B3747; N9999 N6440-R; B9999
B4842 B4831 B4740; K9483-R; K9574 K9483; N9999 N6177-R; N9999 N6111
N6097; K9416

003 018; K9712 K9676; Q9999 Q7114-R

?ss pn=de 4015739

S5 1 (PN=DE 4015739.)

?t s5/9/all

5/9/1

DIALOG(R)File 351:Derwent WPI

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WPI Acc No: 1991-347342/ 199148

XRAM Acc No: C91-149752

**Laminated polypropylene composites - by heating one surface of solid
polypropylene substrate and pressing plasticised surface obtd. onto layer
of polypropylene foam**

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Number of Countries: 018 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4015739	A	19911121	DE 4015739	A	19900516	199148 B
WO 9117882	A	19911128				199150
PT 97677	A	19920331				199216
EP 528879	A1	19930303	EP 91909104	A	19910513	199309
			WO 91EP884	A	19910513	
JP 5508360	W	19931125	JP 91508744	A	19910513	199401
			WO 91EP884	A	19910513	
US 5300361	A	19940405	WO 91EP884	A	19910513	199413
			US 92938042	A	19921112	
EP 528879	B1	19940622	EP 91909104	A	19910513	199424
			WO 91EP884	A	19910513	
DE 59102034	G	19940728	DE 502034	A	19910513	199429
			EP 91909104	A	19910513	
			WO 91EP884	A	19910513	
ES 2056650	T3	19941001	EP 91909104	A	19910513	199440

Priority Applications (No Type Date): DE 4015739 A 19900516

Cited Patents: EP 231013; GB 1226053; GB 1356780; GB 1346780

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9117882	A				
Designated States (National): JP KR PL US					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LU NL SE					
EP 528879	A1 G	11	B32B-005/18	Based on patent	WO 9117882
Designated States (Regional): BE DE DK ES FR GB GR IT NL SE					
JP 5508360	W	4	B29C-065/02	Based on patent	WO 9117882
US 5300361	A	3	B32B-031/26	Based on patent	WO 9117882
EP 528879	B1 G	4	B32B-005/18	Based on patent	WO 9117882
Designated States (Regional): BE DE DK ES FR GB GR IT NL SE					
DE 59102034	G		B32B-005/18	Based on patent	EP 528879
Based on patent WO 9117882					
ES 2056650	T3		B32B-005/18	Based on patent	EP 528879

Abstract (Basic): DE 4015739 A

A process is claimed for the prodn. of a composite prod. (I) from polypropylene (PP) by bonding solid substrate layer(s) (A) with a layer of foam (B); the novelty is that (only) the surface of (A) which faces (B) is plasticised by heating and the two are then brought together

under pressure at 0.1-0.4 N/mm². Pref., the surface of (A) facing (B) has an embossed structure.

Pref., (A) consists of 90-60 pts. wt. isotactic PP or EP copolymer contg. up to 25 wt.% ethylene, 10-20 pts. wt. rubbery copolymer compatible with PP (e.g. EPDM, SBS copolymer) and 20-40 pts. wt. reinforcing fillers (talcum, chalk, glass fibre, etc.); (B) is obt'd. e.g. by foaming a mixt. of PP with blowing agent (e.g. fluorocarbon) and normal additives, etc.

USE/ADVANTAGE - The invention provides solid plastic/foam laminated composite for use in the prodn. of insulating, shock-absorbing prods., e.g. bumpers, head-rests, dashboard panels, door linings, arm rests etc. for motor vehicles. A strong, durable bond is obt'd. by welding the 2 components together, and the prods., being made of only one type of plastic, are easily recycled. (3pp Dwg.No.0/0)

Abstract (Equivalent): EP 528879 B

A process for the production of a composite comprising at least one solid base layer, produced by injection moulding, of a propylene polymer by bonding the two layers, where exclusively the surface of the base layer facing the foam layer and provided with relief structures is softened by warming to a melt layer depth of from 2 to 3 mm, and the base layer and foam layer are then joined under a pressure of from 0.1 to 0.4 N/mm².

Dwg.0/0

Abstract (Equivalent): US 5300361 A

Prodn. of a polypropylene composite of a base layer, foam layer and top layer comprises injection moulding a base layer of polypropylene with an upper surface relief structure; heating and softening the upper surface of the base layer, melting to a depth 2-3mm, and application of a polypropylene foam layer; and similarly bonding to an upper polypropylene layer.

USE/ADVANTAGE - The prods. are sound and heat insulating, shock absorbing materials for vehicle components, e.g., dashboards, arm and head rests, door panels, bumpers, etc.. Allows recycling of polypropylene waste.

Dwg.0/0

Title Terms: LAMINATE; POLYPROPYLENE; COMPOSITE; HEAT; ONE; SURFACE; SOLID; POLYPROPYLENE; SUBSTRATE; PRESS; PLASTICISED; SURFACE; OBTAIN; LAYER; POLYPROPYLENE; FOAM

Derwent Class: A17; A95; P73

International Patent Class (Main): B29C-065/02; B32B-005/18; B32B-031/26

International Patent Class (Additional): B29C-067/20; B29D-009/00;

C08J-005/00

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): A04-G03D; A11-C01D; A12-S04

Plasdoc Codes (KS): 0002 0009 0011 0017 0037 0205 0060 0229 3151 0241 0242

3153 3154 0248 0250 0251 0306 3159 1095 1180 1201 2211 2214 2218 2306

3221 2371 2401 2437 2446 3228 2492 2496 2536 2617 2625 2632 2635 2646

3252 3254 2726 3300 2829 2844

Polymer Fragment Codes (PF):

001 014 03- 032 034 036 041 046 047 050 055 056 06- 075 117 122 134 15-

174 18- 229 27& 28& 308 309 310 387 42& 42- 421 431 441 443 448 449

454 465 468 477 491 52& 54& 55& 551 556 56& 560 563 567 57& 570 573

575 58& 581 586 597 600 617 672 688 720 721 723

Derwent Registry Numbers: 1541-U; 5090-U; 5214-U

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1 PN=DE 20102194

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DIALOG(R)File 351:Derwent WPI

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013817502 **Image available**

WPI Acc No: 2001-301714/ 200132

XRAM Acc No: C01-092791

XRPX Acc No: N01-216584

Lining of an automobile roof comprises two layers which are welded to one